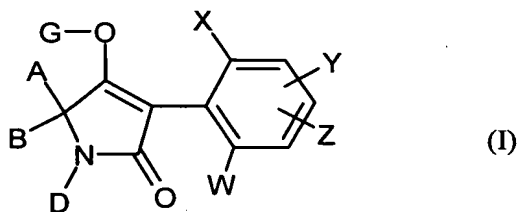


Patent claims

1. Compositions, comprising compounds of the formula (I)



in which

- 5 X represents halogen, alkyl, alkoxy, haloalkyl, haloalkoxy or cyano,

W, Y and Z independently of one another represent hydrogen, halogen, alkyl, alkoxy, haloalkyl, haloalkoxy or cyano,

- 10 A represents hydrogen, in each case optionally halogen-substituted alkyl, alkoxyalkyl, saturated, optionally substituted cycloalkyl in which optionally at least one ring atom is replaced by a heteroatom,

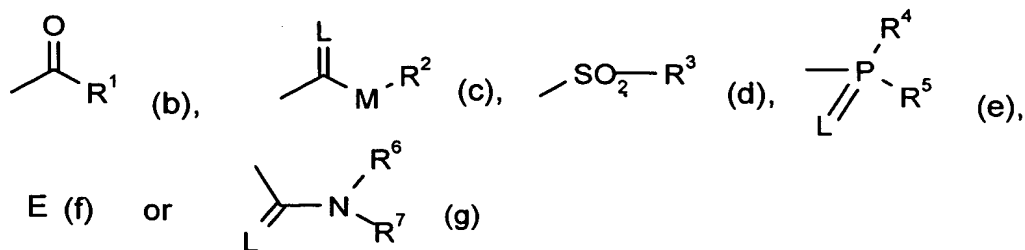
B represents hydrogen or alkyl,

A and B together with the carbon atom to which they are attached represent a saturated or unsaturated, unsubstituted or substituted cycle which optionally contains at least one heteroatom,

- 15 D represents hydrogen or an optionally substituted radical from the group consisting of alkyl, alkenyl, alkoxyalkyl, saturated cycloalkyl in which optionally one or more ring members are replaced by heteroatoms,

20 A and D together with the atoms, to which they are attached, represent a saturated or unsaturated cycle which optionally contains at least one heteroatom and is unsubstituted or substituted in the A,D moiety,

G represents hydrogen (a) or represents one of the groups



in which

E represents a metal ion or an ammonium ion,

L represents oxygen or sulphur,

5 M represents oxygen or sulphur,

10 R^1 represents in each case optionally halogen-substituted alkyl, alkenyl, alkoxyalkyl, alkylthioalkyl, polyalkoxyalkyl or optionally halogen-, alkyl- or alkoxy-substituted cycloalkyl which may be interrupted by at least one heteroatom, in each case optionally substituted phenyl, phenylalkyl, hetaryl, phenoxyalkyl or hetaryloxyalkyl,

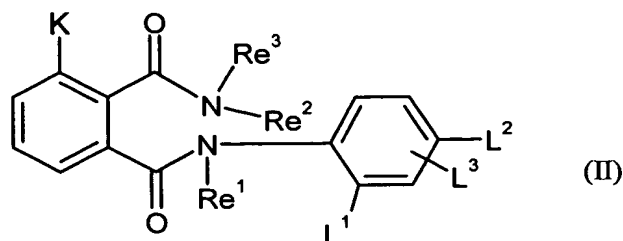
R^2 represents in each case optionally halogen-substituted alkyl, alkenyl, alkoxyalkyl, polyalkoxyalkyl or represents in each case optionally substituted cycloalkyl, phenyl or benzyl,

15 R^3 represents optionally halogen-substituted alkyl or optionally substituted phenyl,

R^4 and R^5 independently of one another represent in each case optionally halogen-substituted alkyl, alkoxy, alkylamino, dialkylamino, alkylthio, alkenylthio, cycloalkylthio or represent in each case optionally substituted phenyl, benzyl, phenoxy or phenylthio and

20 R^6 and R^7 independently of one another represent hydrogen, in each case optionally halogen-substituted alkyl, cycloalkyl, alkenyl, alkoxy, alkoxyalkyl, represent optionally substituted phenyl, represent optionally substituted benzyl or together with the N atom to which they are attached represent an optionally substituted ring which is optionally interrupted by
25 oxygen or sulphur

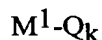
and at least one phthalic diamide of the formula (II)



in which

K represents halogen, cyano, alkyl, haloalkyl, alkoxy or haloalkoxy,

- 5 $\text{Re}^1, \text{Re}^2, \text{Re}^3$ each independently of one another represent hydrogen, cyano, represent optionally halogen-substituted $\text{C}_3\text{-C}_8\text{-cycloalkyl}$ or represent a group of the formula



in which

- 10 M^1 represents optionally substituted alkylene, alkenylene or alkynylene,

Q represents hydrogen, halogen, cyano, nitro, haloalkyl, in each case optionally substituted $\text{C}_3\text{-C}_8\text{-cycloalkyl}$, alkylcarbonyl or alkoxycarbonyl, in each case optionally substituted phenyl, hetaryl or represents a group



- 15 in which

T represents $-\text{O}-$, $-\text{S}(\text{O})_m-$ or $\text{---}\underset{\text{Re}^5}{\text{N}}\text{---}$

Re^4 represents hydrogen, in each case optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, alkoxyalkyl, alkylcarbonyl, alkoxycarbonyl, phenyl, phenylalkyl, phenylalkoxy, hetaryl, hetarylalkyl,

- 20 Re^5 represents hydrogen, represents in each case optionally substituted alkylcarbonyl, alkoxycarbonyl, phenylcarbonyl or phenylalkoxycarbonyl,

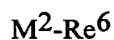
k represents the numbers 1 to 4,

m represents the numbers 0 to 2,

Re¹ and Re² together form an optionally substituted four- to seven-membered ring which may optionally be interrupted by heteroatoms,

5 L¹ and L³ independently of one another represent hydrogen, halogen, cyano or in each case optionally substituted alkyl, alkoxy, Alk-S(O)_m-, phenyl, phenoxy or hetaryloxy,

L² represents hydrogen, halogen, cyano, in each case optionally substituted alkyl, alkenyl, alkynyl, haloalkyl, cycloalkyl, phenyl, hetaryl or represents the group



10 in which

M² represents -O- or -S(O)_m-

and

Re⁶ represents in each case optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, phenyl or hetaryl,

15 L¹ and L³ or

L¹ and L² together form an optionally substituted five- or six-membered ring which may optionally be interrupted by heteroatoms.

2. Compositions according to Claim 1, comprising compounds of the formula (II)

in which

20 K represents fluorine, chlorine, bromine, iodine, cyano, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkoxy or C₁-C₆-haloalkoxy,

Re¹, Re² and Re³ each independently of one another represent hydrogen, cyano, represent optionally halogen-substituted C₃-C₆-cycloalkyl or represent a group of the formula

25 M¹-Q_k

in which

M^1 represents C_1 - C_8 -alkylene, C_3 - C_6 -alkenylene or C_3 - C_6 -alkynylene,

Q represents hydrogen, halogen, cyano, nitro, haloalkyl or represents optionally fluorine-, chlorine-, C_1 - C_6 -alkyl- or C_1 - C_6 -alkoxy-substituted C_3 - C_8 -cycloalkyl in which optionally one or two not directly adjacent ring members are replaced by oxygen and/or sulphur or represents in each case optionally halogen-substituted C_1 - C_6 -alkylcarbonyl or C_1 - C_6 -alkoxycarbonyl or represents in each case optionally halogen-, C_1 - C_6 -alkyl-, C_1 - C_6 -haloalkyl-, C_1 - C_6 -alkoxy-, C_1 - C_6 -haloalkoxy-, cyano- or nitro-substituted phenyl or hetaryl having 5 or 6 ring atoms or represents a group

$T-Re^4$

in which

T represents $-O-$, $-S(O)_m-$ or $\begin{array}{c} -N- \\ | \\ Re^5 \end{array}$,

Re^4 represents hydrogen, represents in each case optionally fluorine- and/or chlorine-substituted C_1 - C_8 -alkyl, C_3 - C_8 -alkenyl, C_3 - C_8 -alkynyl, C_3 - C_8 -cycloalkyl, C_3 - C_8 -cycloalkyl- C_1 - C_2 -alkyl, C_1 - C_6 -alkylcarbonyl, C_1 - C_6 -alkoxycarbonyl, represents phenyl, C_1 - C_4 -phenylalkyl, C_1 - C_4 -phenylalkyloxy, hetaryl or hetarylalkyl, each of which is optionally mono- to tetrasubstituted by halogen, C_1 - C_6 -alkyl, C_1 - C_6 -alkoxy, C_1 - C_4 -haloalkyl, C_1 - C_4 -haloalkoxy, nitro or cyano, hetaryl having 5 or 6 ring atoms,

Re^5 represents hydrogen, represents in each case optionally fluorine- and/or chlorine-substituted C_1 - C_6 -alkylcarbonyl, C_1 - C_6 -alkoxy-carbonyl, represents phenylcarbonyl or phenyl- C_1 - C_4 -alkyloxycarbonyl, each of which is optionally mono- to tetrasubstituted by halogen, C_1 - C_6 -alkyl, C_1 - C_6 -alkoxy, C_1 - C_4 -haloalkyl, C_1 - C_4 -haloalkoxy, nitro or cyano,

k represents the numbers 1 to 3,

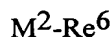
m represents the numbers 0 to 2,

Re¹ and Re² form a five- or six-membered ring which may optionally be interrupted by an oxygen or sulphur atom,

5 L¹ and L³ independently of one another represent hydrogen, cyano, fluorine, chlorine, bromine, iodine, C₁-C₆-alkyl, C₁-C₄-haloalkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkoxy, C₁-C₄-alkyl-S(O)_m-, C₁-C₄-haloalkyl-S(O)_m-, represent phenyl, phenoxy, pyridinyloxy, thiazolyloxy or pyrimidyloxy, each of which is optionally mono- to trisubstituted by fluorine, chlorine, bromine, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, cyano or nitro,

10 L² represents hydrogen, fluorine, chlorine, bromine, iodine, cyano, represents in each case optionally fluorine- and/or chlorine-substituted C₁-C₁₀-alkyl, C₂-C₁₀-alkenyl, C₂-C₆-alkynyl, represents in each case optionally fluorine-, chlorine-substituted C₃-C₆-cycloalkyl, represents phenyl, pyridyl, thienyl, pyrimidyl or thiazolyl, each of which is optionally mono- to trisubstituted by fluorine, chlorine, bromine, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, cyano
15 or nitro,

or represents a group



in which

M² represents -O- or -S(O)_m- and

20 Re⁶ represents in each case optionally fluorine- and/or chlorine-substituted C₁-C₈-alkyl, C₂-C₈-alkenyl, C₃-C₆-alkynyl or C₃-C₆-cycloalkyl, represents phenyl, pyridyl, pyrimidyl or thiazolyl, each of which is optionally mono- to trisubstituted by fluorine, chlorine, bromine, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, cyano or nitro,

25 L¹ and L³

or

L² and L³ together form in each case an optionally fluorine- and/or C₁-C₂-alkyl-substituted five- or six-membered ring which may optionally be interrupted by one or two oxygen atoms.

3. Compositions according to Claim 1, comprising compounds of the formula (II) in which

K represents chlorine, bromine and iodine,

Re¹, Re² and Re³ each independently of one another represent hydrogen or a group of the formula

5 M^1-Q_k

in which

M¹ represents C₁-C₈-alkylene, C₃-C₆-alkenylene or C₃-C₆-alkynylene,

Q represents hydrogen, fluorine, chlorine, cyano, trifluoromethyl, C₃-C₆-cycloalkyl or represents a group

10 $T-Re^4$

in which

T represents -O- or -S(O)_m-,

15 Re⁴ represents hydrogen, represents C₁-C₆-alkyl, C₃-C₆-alkenyl, C₃-C₆-alkynyl or C₃-C₆-cycloalkyl, each of which is optionally mono- to trisubstituted by fluorine and/or chlorine,

k represents the numbers 1 to 3,

m represents the numbers 0 to 2,

20 L¹ and L³ independently of one another represent hydrogen, fluorine, chlorine, bromine, iodine, cyano, C₁-C₄-alkyl, C₁-C₂-haloalkyl, C₁-C₄-alkoxy, C₁-C₂-haloalkoxy, represent phenyl or phenoxy, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₂-haloalkyl, C₁-C₂-haloalkoxy, cyano or nitro,

25 L² represents hydrogen, fluorine, chlorine, bromine, iodine, cyano, represents C₁-C₆-alkyl, C₂-C₆-alkenyl, C₂-C₆-alkynyl, C₃-C₆-cycloalkyl, each of which is optionally mono- to tridecasubstituted by fluorine and/or chlorine, or represents a group

M^2-Re^6

in which

M^2 represents $-O-$ or $-S(O)_m-$,

and

5 Re^6 represents C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl or C_3-C_6 -cycloalkyl, each of which is optionally mono- to tridecasubstituted by fluorine and/or chlorine, represents phenyl or pyridyl, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, C_1-C_4 -alkyl, C_1-C_4 -alkoxy, trifluoromethyl, difluoromethoxy, trifluoromethoxy, cyano or nitro.

4. Compositions according to Claim 1, comprising compounds of the formula (II) in which

10 K represents iodine,

Re^1 and Re^2 represent hydrogen,

Re^3 represents a group of the formula



in which

15 M^1 represents $-CHCH_3-CH_2-$, $-C(CH_3)_2-CH_2-$, $-CHC_2H_5-CH_2-$,
 $\begin{array}{c} \text{---C---CH}_2\text{---} \\ \diagup \quad \diagdown \\ H_3C \quad C_2H_5 \end{array}$, $-C(C_2H_5)_2-CH_2-$,

Q represents hydrogen, fluorine, chlorine, cyano, trifluoromethyl, C_3-C_6 -cycloalkyl or represents a group



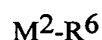
20 in which

T represents $-S-$, $-SO-$ or $-SO_2-$,

Re^4 represents methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, sec-butyl, tert-butyl, allyl, butenyl or isoprenyl, each of which is optionally mono- to trisubstituted by fluorine and/or chlorine,

L^1 and L^3 independently of one another represent hydrogen, fluorine, chlorine, bromine, iodine, cyano, methyl, ethyl, n-propyl, isopropyl, tert-butyl, methoxy, ethoxy, trifluoromethyl, difluoromethoxy or trifluoromethoxy,

5 L^2 represents hydrogen, fluorine, chlorine, bromine, iodine, cyano, represents methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, sec-butyl, tert-butyl, allyl, butenyl or isoprenyl, each of which is optionally mono- to nonasubstituted by fluorine and/or chlorine, or represents a group



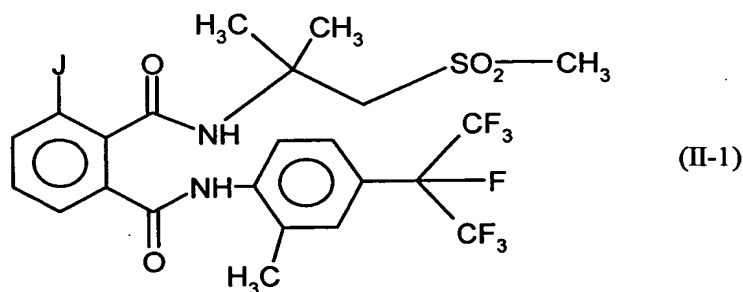
in which

10 M^2 represents oxygen or sulphur,

and

15 Re^6 represents methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, sec-butyl, tert-butyl, allyl, butenyl or isoprenyl, each of which is optionally mono- to nonasubstituted by fluorine and/or chlorine, represents phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, methyl, ethyl, methoxy, trifluoromethyl, difluoromethoxy, trifluoromethoxy, cyano or nitro.

5. Compositions according to Claim 1, comprising the compound of the formula (II-1)



6. Compositions according to Claim 1, comprising compounds of the formula (I) in which

20 W represents hydrogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, chlorine, bromine or fluorine,

X represents C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -haloalkyl, fluorine, chlorine or bromine,

Y and Z independently of one another represent hydrogen, C₁-C₄-alkyl, halogen, C₁-C₄-alkoxy or C₁-C₄-haloalkyl,

A represents hydrogen or in each case optionally halogen-substituted C₁-C₆-alkyl or C₃-C₈-cycloalkyl,

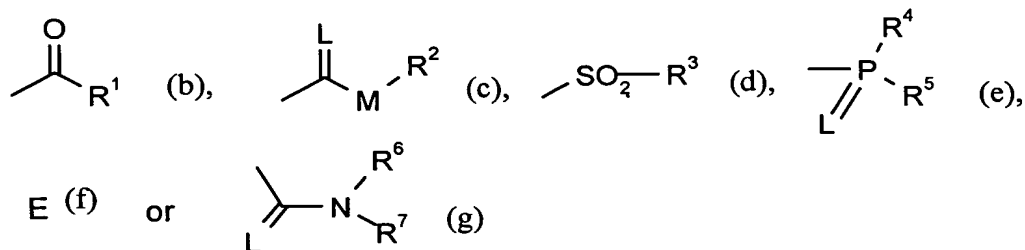
5 B represents hydrogen, methyl or ethyl,

A, B and the carbon atom to which they are attached represent saturated C₃-C₆-cycloalkyl in which optionally one ring member is replaced by oxygen or sulphur and which is optionally mono- or disubstituted by C₁-C₄-alkyl, trifluoromethyl or C₁-C₄-alkoxy,

10 D represents hydrogen, in each case optionally fluorine- or chlorine-substituted C₁-C₆-alkyl, C₃-C₄-alkenyl or C₃-C₆-cycloalkyl,

A and D together represent optionally methyl-substituted C₃-C₄-alkanediyl in which optionally one methylene group is replaced by sulphur,

G represents hydrogen (a) or represents one of the groups



15

in which

E represents a metal ion or an ammonium ion,

L represents oxygen or sulphur and

M represents oxygen or sulphur,

20 R¹ represents in each case optionally halogen-substituted C₁-C₁₀-alkyl, C₂-C₁₀-alkenyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₁-C₄-alkylthio-C₁-C₄-alkyl or optionally fluorine-, chlorine-, C₁-C₄-alkyl- or C₁-C₂-alkoxy-substituted C₃-C₆-cycloalkyl,

represents optionally fluorine-, chlorine-, bromine-, cyano-, nitro-, C₁-C₄-alkyl-, C₁-C₄-alkoxy-, trifluoromethyl- or trifluoromethoxy-substituted phenyl,

represents in each case optionally chlorine- or methyl-substituted pyridyl or thienyl,

5 R² represents in each case optionally fluorine- or chlorine-substituted C₁-C₁₀-alkyl, C₂-C₁₀-alkenyl, C₁-C₄-alkoxy-C₂-C₄-alkyl,

represents optionally methyl- or methoxy-substituted C₅-C₆-cycloalkyl or

10 represents in each case optionally fluorine-, chlorine-, bromine-, cyano-, nitro-, C₁-C₄-alkyl-, C₁-C₄-alkoxy-, trifluoromethyl- or trifluoromethoxy-substituted phenyl or benzyl,

R³ represents optionally fluorine-substituted C₁-C₄-alkyl or represents optionally fluorine-, chlorine-, bromine-, C₁-C₄-alkyl-, C₁-C₄-alkoxy-, trifluoromethyl-, trifluoromethoxy-, cyano- or nitro-substituted phenyl,

15 R⁴ represents in each case optionally fluorine- or chlorine-substituted C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-alkylamino, C₁-C₄-alkylthio or represents in each case optionally fluorine-, chlorine-, bromine-, nitro-, cyano-, C₁-C₄-alkoxy-, trifluoromethoxy-, C₁-C₄-alkylthio-, C₁-C₄-haloalkylthio-, C₁-C₄-alkyl- or trifluoromethyl-substituted phenyl, phenoxy or phenylthio,

R⁵ represents C₁-C₄-alkoxy or C₁-C₄-thioalkyl,

20 R⁶ represents C₁-C₆-alkyl, C₃-C₆-cycloalkyl, C₁-C₆-alkoxy, C₃-C₆-alkenyl, C₁-C₄-alkoxy-C₁-C₄-alkyl,

R⁷ represents C₁-C₆-alkyl, C₃-C₆-alkenyl or C₁-C₄-alkoxy-C₁-C₄-alkyl,

R⁶ and R⁷ together represent an optionally methyl- or ethyl-substituted C₃-C₆-alkylene radical in which optionally one carbon atom is replaced by oxygen or sulphur.

25 7. Compositions according to Claim 1, comprising compounds of the formula (I) in which

W represents hydrogen, methyl, ethyl, chlorine, bromine or methoxy,

X represents chlorine, bromine, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy or trifluoromethyl,

Y and Z independently of one another represent hydrogen, fluorine, chlorine, bromine, methyl, ethyl, propyl, isopropyl, trifluoromethyl or methoxy,

A represents methyl, ethyl, propyl, isopropyl, butyl, isobutyl, sec-butyl, tert-butyl, cyclopropyl, cyclopentyl or cyclohexyl,

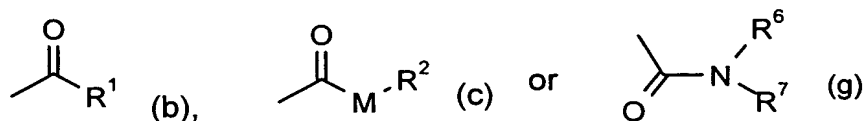
5 B represents hydrogen, methyl or ethyl,

A, B and the carbon atom to which they are attached represent saturated C₆-cycloalkyl in which optionally one ring member is replaced by oxygen and which is optionally monosubstituted by methyl, ethyl, methoxy, ethoxy, propoxy or butoxy,

10 D represents hydrogen, represents methyl, ethyl, propyl, isopropyl, butyl, isobutyl, allyl, cyclopropyl, cyclopentyl or cyclohexyl,

A and D together represent optionally methyl-substituted C₃-C₄-alkanediyl,

G represents hydrogen (a) or represents one of the groups



in which

15 M represents oxygen or sulphur,

R¹ represents C₁-C₈-alkyl, C₂-C₄-alkenyl, methoxymethyl, ethoxymethyl, ethylthiomethyl, cyclopropyl, cyclopentyl or cyclohexyl,

represents phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, cyano, nitro, methyl, ethyl, methoxy, trifluoromethyl or trifluoromethoxy,

20 represents pyridyl or thienyl, each of which is optionally mono- or disubstituted by chlorine or methyl,

R² represents C₁-C₈-alkyl, C₂-C₄-alkenyl, methoxyethyl, ethoxyethyl or represents phenyl or benzyl,

25 R⁶ and R⁷ independently of one another represent methyl, ethyl or together represent a C₅-alkylene radical in which the C₃-methylene group is replaced by oxygen.

8. Compositions according to Claim 1, comprising compounds of the formula (I) in which

W represents hydrogen or methyl,

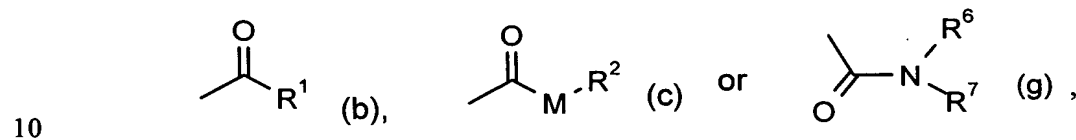
X represents chlorine, bromine or methyl,

Y and Z independently of one another represent hydrogen, chlorine, bromine or methyl,

5 A, B and the carbon atom to which they are attached represent saturated C₆-cycloalkyl in which optionally one ring member is replaced by oxygen and which is optionally monosubstituted by methyl, methoxy, ethoxy, propoxy or butoxy,

D represents hydrogen,

G represents hydrogen (a) or represents one of the groups



in which

M represents oxygen or sulphur,

R¹ represents C₁-C₈-alkyl, C₂-C₄-alkenyl, methoxymethyl, ethoxymethyl, ethylmethylthio, cyclopropyl, cyclopentyl, cyclohexyl or

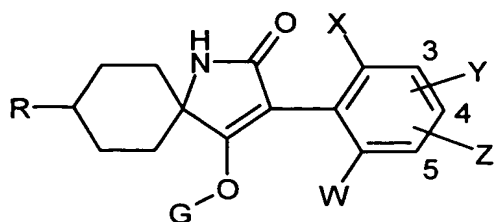
15 represents phenyl which is optionally monosubstituted by fluorine, chlorine, bromine, methyl, methoxy, trifluoromethyl, trifluoromethoxy, cyano or nitro,

represents pyridyl or thienyl, each of which is optionally monosubstituted by chlorine or methyl,

20 R² represents C₁-C₈-alkyl, C₂-C₄-alkenyl, methoxyethyl, ethoxyethyl, phenyl or benzyl,

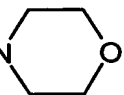
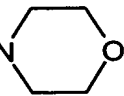
R⁶ and R⁷ independently of one another represent methyl, ethyl or together represent a C₅-alkylene radical in which the C₃-methylene group is replaced by oxygen.

25 9. Compositions according to Claim 1, comprising compounds of the formula (I)



(I)

in which the substituents have the radical definitions given in the table

W	X	Y	Z	R	G
H	Br	5-CH ₃	H	OCH ₃	CO-i-C ₃ H ₇
H	Br	5-CH ₃	H	OCH ₃	CO ₂ -C ₂ H ₅
H	CH ₃	5-CH ₃	H	OCH ₃	H
H	CH ₃	5-CH ₃	H	OCH ₃	CO ₂ -C ₂ H ₅
CH ₃	CH ₃	3-Br	H	OCH ₃	H
CH ₃	CH ₃	3-Cl	H	OCH ₃	H
H	Br	4-CH ₃	5-CH ₃	OCH ₃	CO-i-C ₃ H ₇
H	CH ₃	4-Cl	5-CH ₃	OCH ₃	CO ₂ C ₂ H ₅
H	CH ₃	4-CH ₃	5-CH ₃	OCH ₃	CO-N ₁ 
CH ₃	CH ₃	3-CH ₃	4-CH ₃	OCH ₃	H
H	CH ₃	5-CH ₃	H	OC ₂ H ₅	CO-N ₁ 
CH ₃	CH ₃	3-Br	H	OC ₂ H ₅	CO-i-C ₃ H ₇

W	X	Y	Z	R	G
H	CH ₃	4-CH ₃	5-CH ₃	OC ₂ H ₅	CO-n-Pr
H	CH ₃	4-CH ₃	5-CH ₃	OC ₂ H ₅	CO-i-Pr
H	CH ₃	4-CH ₃	5-CH ₃	OC ₂ H ₅	CO-c-Pr

10. Compositions according to Claim 1, comprising the compound of formula (I-4) and the active compound of the formula (II-1).
11. Use of mixtures as defined in Claim 1 for controlling animal pests.
- 5 12. Method for controlling animal pests, characterized in that mixtures as defined in Claim 1 are allowed to act on animal pests and/or their habitat.
13. Process for preparing insecticidal and acaricidal compositions, characterized in that mixtures as defined in Claim 1 are mixed with extenders and/or surfactants.